

# Sea Technology Index

## Volume 36 (1995)

This instant reference index of technical subjects, news, and special features from Volume 36 of *Sea Technology* magazine provides information about articles and news item subjects (Part One) and authors of feature articles (Part Two). Numbers following entries indicate issue month and page number.—*Editor*

### SUBJECT INDEX

- A-
- Acoustic doppler current profilers,  
affordable "Workhorse" (article)..... 2/61  
broadband (article)..... 1/50  
shallow water (article)..... 6/43  
Acoustic self-noise (article)..... 11/45  
Acoustic telemetry, motion-decoupled buoys (article)..... 9/25  
Acoustics,  
flow sensor (article)..... 2/27  
tomography receiver (article)..... 2/43  
Advanced Technology Program, funding..... 2/79  
Airgun looms (article)..... 8/72  
Alaska Marine Institute..... 8/76  
Alden, Robin, named to Maine Cabinet..... 2/9  
ANWR, protection legislation..... 4/66  
Aquaculture,  
opportunities (article)..... 9/59  
R&D act proposed..... 6/72  
Army Corps of Engineers projects (R&F)..... 1/36  
Artificial islands,  
fiberglass materials (article)..... 4/47  
waste disposal (article)..... 5/63  
ASW, combat system modernized (article)..... 11/17  
Auger project, production records..... 1/66  
Authorization bills,  
NOAA (FY 96)..... 9/9  
science "umbrella"..... 11/9  
AUVs,  
Canadian's (article)..... 4/19  
low-power data acquisition (article)..... 12/41  
Martin vehicle (article)..... 2/19  
MIT Odyssey (article)..... 12/15
- B-
- Bioacoustical oceanography (article)..... 2/10  
Biodiversity, marine, NRC report..... 4/9  
Biofouling control, submarine (article)..... 10/51  
Biogeochemical parameter monitoring (article)..... 7/55  
BIOSPAR platform (article)..... 2/10  
Biotechnology,  
marine, advances (R&F)..... 1/27  
marine plants (article)..... 4/58  
Boating fatalities..... 9/95  
Budgets,  
Coast Guard request "intact," \$3.8 billion..... 3/77  
Commerce Technology Administration, \$1.04 billion  
current resolution #1 (FY 96)..... 3/78  
Corps of Engineers request is \$3.7 billion..... 3/77  
EPA "models" request is \$7.4 billion..... 3/77  
federal, FY 96 requests (article)..... 4/33  
Navy RDT&E requests, FY 96 (article)..... 5/34  
NOAA Corps, fleet are targets..... 3/9  
NOAA FY 96 (Rohrabacher)..... 7/59  
NOAA request to \$2.2 billion..... 3/77  
NSF request to \$3.36 billion..... 3/77  
recision activities, FY 95..... 4/9  
Buoys,  
3-meter discus (article)..... 9/33  
Kiel-Tiefendrifter (article)..... 2/55  
motion-decoupled (article)..... 9/25  
new open-ocean for navigation (article)..... 8/56  
SeaWatch program, monitoring (article)..... 2/49  
TOA array, update (article)..... 10/47  
Business outlook (article)..... 2/75
- C-
- Cable & Connector Workshop (Conference Preview)..... 2/73  
Cable & Connector Workshop (Conference Report)..... 2/75  
Cables,  
digital cable test system (article)..... 7/41  
fiber-optic designs (article)..... 2/69  
minimizing loop-forming tendency (article)..... 7/21  
undersea fiber-optic systems (article)..... 7/29  
Cameras,  
conventional underwater (article)..... 12/21  
digital imaging, megapixels (article)..... 9/53  
CARIOCA buoy, sensors (article)..... 10/23  
Certification, quality, ISO 9000 (article)..... 1/54  
Coast Guard,  
cutting regulations..... 11/64  
double hull rule..... 4/64  
FY 96 budget request "intact" at \$3.8 billion..... 3/77  
FY 96 request (article)..... 4/43  
FY 96 authorization..... 6/9  
GPS technology (article)..... 6/70  
lightening zones..... 10/57  
reducing regulations..... 6/72
- Coastal Ocean Program (article)..... 8/27  
Coastal protection legislation..... 7/9  
Coastal surveying (SHOALS) (article)..... 6/10  
Coastal surveys, Martin AUV (article)..... 2/19  
Coastal Zone 95 (Conference Preview)..... 6/32  
CoastWatch (article)..... 8/27  
Commerce Department, dismantling..... 8/74, 9/92,  
10/9, 11/9, 12/7  
Commercial fishing trends (R&F)..... 1/39  
Commercial-off-the-shelf (COTS) systems (article)..... 5/69  
Communications, satellite, low-Earth-orbit (article)..... 3/61  
Company Profiles, Remote Ocean Systems Inc..... 12/49  
Conference Previews,  
22nd Cable & Connector Workshop..... 2/73  
Coastal Zone 95..... 6/32  
IMDEX 95..... 2/65  
Oceans 95..... 9/85  
Offshore Europe 95..... 8/55  
OTC 95..... 4/54  
RTCM Annual Assembly..... 3/74  
SEG 95..... 8/43  
tek.Conference 96..... 12/53  
Underwater Intervention 96..... 12/47  
Conference Reports,  
3rd International Rope Technology Workshop..... 9/49  
Cable & Connector Workshop..... 7/35  
COSU 95..... 8/49  
Oceans 95..... 12/57  
Osaka Bay Symposium..... 9/81  
Congress, 104th, prospects for oceans (Soapbox)..... 5/97  
Contaminants, hydrocarbon, seafloor (article)..... 8/37  
CORE,  
goals, activities (R&F)..... 1/21  
grass-roots efforts (Editorial)..... 5/7  
Corps of Engineers, restructuring..... 11/63  
COSPAS-SARSAT agreement..... 10/9  
COSU 95 (Conference Report)..... 8/49  
Current measurements (article)..... 8/68  
Current profiler, acoustic doppler, broadband (article)..... 1/50  
Cussler, Clive, CSS Hunley found..... 6/9
- D-
- Data acquisition, AUVs (article)..... 12/41  
Dechlorination, shipboard pollution  
prevention (article)..... 10/51  
Deep submergence, Trieste 1 anniversary (article)..... 6/59  
Deepstar project, activities..... 1/66  
Defense conversion..... 5/9  
Defense Department strategy (R&F)..... 1/29  
Defense, dual-use projects..... 6/72  
Defense spending, current resolution #1 (FY 96)..... 8/9  
Department of Defense, FY 96 request (article)..... 4/43  
Differential GPS, Army Corps applications (article)..... 3/29  
Discus buoys, 3-meter (article)..... 9/33  
Dismantling, NOAA, legislation (Editorial)..... 6/7, 12/7  
Diving, commercial,  
Edmund Fitzgerald (article)..... 12/10  
inland, industry status (article)..... 12/29  
tek.Conference 96 (preview)..... 12/53  
Dredging, depth control instrumentation (article)..... 3/47  
Duck 94, Army COE projects (R&F)..... 1/36
- E-
- Economics,  
Massachusetts Marine Network (article)..... 9/41  
ocean's worth (article)..... 9/75  
Editorials,  
electronic charts & partnerships..... 3/7  
environmental monitoring definition..... 10/7  
grass-roots policy efforts..... 5/7  
instrumentation critical technology..... 2/7  
marine industry resource..... 7/7  
Navy of the future..... 11/7  
new dimensions in geophysical exploration..... 8/7  
NOAA dismantling legislation..... 6/7, 12/7  
notes to new Congress..... 4/7  
oceans, the real resource..... 9/7  
operational ocean R&D..... 1/7  
Edmund Fitzgerald expedition (article)..... 12/10  
Education, ocean (article)..... 9/89  
Electronic charts,  
CHS/NDI marketing..... 1/67  
IMO standards impact on industry (article)..... 3/23  
impact on waterway safety (article)..... 3/37  
integrated bridge (article)..... 6/63  
partnerships (Editorial)..... 3/7  
proactive user groups..... 4/9  
status (article)..... 3/10  
vessel navigation (article)..... 3/51
- Engineers, U.S./Japan program..... 10/9, 11/64  
Environmental analyses, software (article)..... 5/15  
Environmental conference..... 11/63  
Environmental data exchange..... 7/60  
Environmental monitoring,  
CARIOCA buoy (article)..... 10/23  
deep water (article)..... 8/15  
Definition (Editorial)..... 10/7  
Great Lakes (article)..... 9/65  
ice/snow measurement (article)..... 10/39  
Martin AUV (article)..... 2/19  
SeaWatch program (article)..... 2/49  
Environmental satellite partnership, NOAA..... 4/9  
Environmental technologies, White House conference..... 1/19  
Environmental technology strategy..... 6/73  
EPA,  
FY 96 request (article)..... 4/42  
research programs..... 5/76
- F-
- Fiber distributed data interface (article)..... 8/63  
Fiber-optic cables, undersea communications (article)..... 7/29  
Fiber-optic survey system (FOSS) (article)..... 5/37  
Fiber-optics, cable designs (article)..... 2/69  
Fibers, polyester ropes (article)..... 7/10  
Finerty Jr., Martin J. (Personality Profiles)..... 6/71  
Firing Line Report, business outlook (R&F)..... 1/43  
Fisheries, Chile/U.S. agreement..... 8/9  
Fishing vessel buyout pilot..... 4/64  
Flexensional-based sonars (article)..... 5/54  
Funding, federal, R&D to drop..... 7/9
- G-
- GEOMAR Research Center (Mini-Profile)..... 4/57  
Geophysical exploration,  
new dimensions (Editorial)..... 8/7  
worldwide activity (article)..... 3/55  
German Underwater Acoustics Institute (Mini-Profile)..... 3/55  
Global Ocean Observing System,  
making the case (article)..... 1/44  
program needed (Editorial)..... 1/7  
SeaWatch connection (article)..... 2/52  
Global positioning systems,  
accuracy improvement..... 1/65  
differential, applications (article)..... 3/29  
fully operational..... 9/92  
market model..... 5/9  
saving Coast Guard money (article)..... 6/70  
study recommendations (selective availability)..... 7/9  
tidal datums, Army COE (article)..... 3/56  
Global warming, surface-suspended  
acoustic receiver (article)..... 2/43  
Graveyard of the Atlantic museum..... 9/93  
Great Lakes restoration (article)..... 9/65  
Gulf deep water oil projects status (article)..... 4/10
- H-
- Harbor Branch, Seward Johnson renovation (article)..... 1/62  
House of Representatives,  
Science Committee jurisdiction..... 1/9  
Walker comments (Science Committee)..... 2/78  
Human-powered subs (competition)..... 5/78  
Hunley, CSS, submarine..... 6/9  
Hydrates, natural gas (article)..... 9/69  
Hydrostreamer, marine, exports (Soapbox)..... 8/105
- I-
- Ice movement, satellite monitoring (article)..... 10/17  
Imaging technology, megapixel (article)..... 9/53  
IMDEX 95 (Conference Preview)..... 2/65  
Instrumentation,  
acoustic extensometer (article)..... 4/33  
acoustic receiver (article)..... 2/43  
affordable Workhorse ADCP (article)..... 2/61  
Bermuda mooring testbed..... 7/61  
biogeochemical oceanography (article)..... 2/10  
biogeochemical monitoring (article)..... 7/55  
broadband ADCP (article)..... 1/50  
CARIOCA buoy sensors (article)..... 10/23  
critical technology (Editorial)..... 2/7  
current measurement (article)..... 8/68  
deep-towed sled (article)..... 5/37  
digital imaging cameras (article)..... 9/53  
dredging depth control (article)..... 3/47  
ice/snow measurement (article)..... 10/39  
Kiel-Tiefendrifter buoy (article)..... 2/55  
look-ahead sonars (article)..... 3/69  
lost instrument network..... 7/62  
Navy UUV for feature mapping (article)..... 6/49

neural network autopilot (article).....	4/51
Onan-India Pipeline survey (article).....	2/16
open-ocean buoys (article).....	8/56
REMOTS, seafloor hydrocarbon contaminants (article).....	8/37
seabed classification (article).....	7/15
shallow water ADCP (article).....	6/43
sonar image processing (article).....	8/45
upper ocean profiler (article).....	2/35
vorticity sensor (article).....	2/27
wave-climate assessment (article).....	10/31
Internet, ocean information (article).....	5/74
ISO 9000 certification (article).....	1/54

<b>-J/K-</b>	
Key West Campaign, littoral warfare research (article).....	6/17
Kiel-Tiefendrifter buoy (article).....	2/55

<b>-L-</b>	
Lease buybacks.....	9/9

Lidar bathymetry (SHOALS) (article).....	6/10
Lighting zones, Coast Guard.....	10/57
Lights, Remote Ocean Systems (profile).....	12/49
Littoral warfare, oceanography (article).....	6/17
Long-range forecasts, economic value.....	7/60
Loop-forming tendency, cables (article).....	7/21
Lost instrument network.....	7/62

<b>-M-</b>	
Manganese nodules, Cook Island (article).....	9/15
Manufacturing Extension Partnership.....	10/57
Mapping.....	
oceanographic, large-diameter UUV (article).....	6/49
seafloor, multibeam technology (article).....	6/67
seafloor, sonar selection (article).....	6/27
Mariculture, replace commercial fishing? (R&F).....	1/39
Marine biotechnology advances (R&F).....	1/27
Marine salvage & OPA 90 (Soapbox).....	2/105
Maritime Hall of Fame.....	9/95
Massachusetts Marine Network (article).....	9/41
Merchant Marine, legislation to save.....	5/77

Minerals Management Service plans (R&F).....	1/35
Mini-Profiles.....	
GEOMAR Research Center.....	4/57
German Underwater Acoustics Institute.....	3/55
Mining, ocean, technology trends (R&F).....	1/40
Modeling, software (article).....	5/10
Monterey Bay marine science centers (Regional Report).....	5/43
Moratorium, offshore drilling.....	7/9
Mussel Watch.....	10/9

<b>-N-</b>	
National Institute for Environment (NIE).....	5/76
National Research Council.....	
marine biodiversity report.....	4/9
weather radar forecasts.....	8/9
Nauticus, maritime center (article).....	10/46
Naval architecture, designs for R/Vs (article).....	6/34
Navigation buoy (article).....	8/56
Navy.....	
biofouling control (article).....	10/51
changes & innovation (article).....	11/10
digital cable test system (article).....	7/41
environmental research critical (R&F).....	1/13
fiber distributed data interface (article).....	8/63
first-generation ORCA UUV (article).....	11/25
future look, future status (Editorial).....	11/7
GESAT and new seafloor map.....	11/9
large-diameter UUV (article).....	6/49
littoral warfare oceanography (article).....	6/17
operational nowcast/forecast system (article).....	5/59
operational predictions (article).....	5/23
research budget requests, FY 96 (article).....	5/34
science & technology (R&F).....	1/29
submarine flank arrays (article).....	11/45
undersea warfare trends (article).....	11/50

<b>NOAA,</b>	
authorization bill (FY 96).....	9/9
Chile/U.S. fisheries agreement.....	3/9
coastal remote sensing (article).....	8/27
dismantling legislation (Editorial).....	6/7
environmental satellite partnership.....	4/9
essential to commercial seafood industry.....	7/9
fishing vessel buyout pilot.....	4/64
FY 96 budget request is \$2.2 billion.....	3/77
FY 96 request (article).....	4/39
House Science Committee jurisdiction.....	1/9
impact of Commerce dismantling.....	9/92
independence? (Editorial).....	1/27
long-range forecast value.....	7/60
move to proposed S&T Department.....	8/74
Mussel Watch.....	10/9
nautical charting partnerships (Soapbox).....	1/3
NRC report on new weather radars.....	8/9
ozone-depleting chemical.....	3/9
research vessel mods.....	5/9
Rohrabacher budget targets.....	3/9
Rohrabacher budget for FY 96.....	7/59
salvage in new NIST.....	11/9
SBIR projects (R&F).....	1/37
science "umbrella" authorization.....	11/9
Sea Grant activities, goals (R&F).....	1/23
sustainable development priority (R&F).....	1/10
weather satellite convergence (NOAA/NASA/DoD).....	7/60
weather services to private sector.....	8/74
web pages (article).....	5/74
without the NOAA Corps? (Soapbox).....	7/85
zebra mussel education, Sea Grant (Soapbox).....	4/101
NOAA Corps, in defense of disbanding (Soapbox).....	10/85
NOAA fleet management (Soapbox).....	9/125
Notes to new Congress (Editorial).....	4/7
Nowcast/forecast oceanographic system (article).....	5/59
NSF.....	
FY 96 budget request is \$3.36 billion.....	3/77
FY 96 request (article).....	4/42

<b>-O-</b>	
Object-oriented technology, software (article).....	5/15
Ocean business, outlook (R&F).....	1/43
Ocean Coalition, grass-roots efforts (Editorial).....	5/7
Ocean mining technology trends (R&F).....	1/40
Ocean Planet exhibit (article).....	6/61
Ocean platforms, fiberglass materials (article).....	4/47
Ocean policy.....	
"sea change" in Washington (article).....	1/59
grass-roots organizations (Editorial).....	5/7
making a case (Editorial).....	9/7
needs (Editorial).....	4/7
NOAA dismantling legislation (Editorial).....	6/7
prospects in 104th Congress (Soapbox).....	5/97
Ocean studies collaboration.....	11/9
Oceanographer, environmental research critical (R&F).....	1/13
Oceanographic data, deep water (article).....	8/15
Oceans 95.....	
attendance (Soapbox).....	6/105
Conference Preview.....	9/85
Conference Report.....	12/57
online services.....	8/9
Odyssey AUV (article).....	12/15

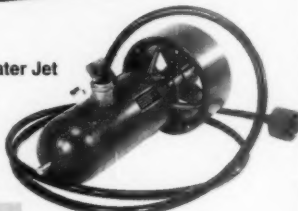
# THL SERIES *SERVO* THRUSTERS

THL Series Thrusters are true servo thrusters. The result of over 20 years of deep submergence experience in the design and operation of ROVs. Simple and reliable, the THL Series is a post axial vane type designed for exceptional thrust performance at speed. The THL Series' high exit velocity makes it possible to propel streamlined underwater vehicles at speeds over 5 knots.



**THL-202 Sea Horse**  
1/2 to 5.0 SHP  
160 lbs thrust  
at 2.5 SHP  
34 lbs. wet  
68 lbs. dry

**THL-404 High Speed Water Jet**  
1/2 to 2.0 SHP  
80 lbs thrust standard  
14 lbs. wet / 18 lbs. dry



**THL-404 TRA Right Angle Tunnel Thrusters**  
1/2 to 2.0 SHP  
2:1 high precision right angle spiral bevel gear box.  
Custom built to your specifications.



Undersea Systems

- Lightweight and Rugged
- True Servo Control Electronics
- Brushless Motor Frame
- Mil Spec. Construction
- Wet Mate Connectors
- AC or DC Power Input
- Depth Rating 3000 or 6000 m
- 10,000 hr MTBF
- Off the Shelf Spares Support
- 6 Month Warranty

Tel. (508) 540-6732  
Fax (508) 540-4209

Deep Sea Systems  
International, Inc.  
P.O. Box 622  
Falmouth, MA  
USA 02541-0622

Offshore Europe 95 (Conference Preview) . . . . . 8/55

#### Offshore oil

aigun looms (article) . . . . .	8/72
ANWR protection bill . . . . .	4/66
Auger production records . . . . .	1/66
coastal protection legislation . . . . .	7/9
deep water projects status (article) . . . . .	4/10
Deepstar project . . . . .	1/66
drilling moratorium . . . . .	7/9
geophysical exploration (Editorial) . . . . .	8/7
geophysical activity status (article) . . . . .	8/10
hydrostreamer exports (Soapbox) . . . . .	8/105
industry outlook (article) . . . . .	9/19
lease buybacks . . . . .	9/9
MMS plans (R&F) . . . . .	1/35
oilfield cleanup system (article) . . . . .	8/66
Oman-India pipeline survey (article) . . . . .	2/16
OPA 90 financial responsibility . . . . .	6/9
resurgent in Gulf (R&F) . . . . .	1/17
royalty relief legislation . . . . .	6/9
seafloor hydrocarbon contaminants (article) . . . . .	8/37
subsea seismic data (article) . . . . .	8/21
weather network from platforms (article) . . . . .	4/27
Oil imports, ANWR and threats . . . . .	3/9
Oil spill cleanup "windows" (article) . . . . .	10/10
On-the-fly GPS applications . . . . .	
Army COE (article) . . . . .	3/29
tidal datum delineations (article) . . . . .	3/56
OPA 90, financial responsibility changed . . . . .	6/9
Operational ocean R&D, GOOS (article) . . . . .	1/44
Operational oceanography (article) . . . . .	5/59
Opinion Poll . . . . .	5/33
ORCA, Navy's first-generation UUV (article) . . . . .	1/25
Osaka Bay Symposium (Conference Report) . . . . .	9/81
OSPREF I wave energy system . . . . .	9/9
OTC 95 (Conference Preview) . . . . .	4/54
Owens, Adm. William, Navy future . . . . .	11/10

#### P-Q

Partnerships, nautical charting (Soapbox) . . . . .	11/93
Personality Profiles, Martin J. Finerty Jr. . . . .	6/71
Pipelines, planning via satellite (article) . . . . .	4/13
Plants, marine, biotechnology (article) . . . . .	4/58
Pollution . . . . .	
Great Lakes restoration (article) . . . . .	9/65
seafloor oilfield cleanup (article) . . . . .	8/66
Polyester ropes, high performance (article) . . . . .	7/10
Profiler, upper ocean (article) . . . . .	2/35
Propulsion . . . . .	
research ships (article) . . . . .	6/34
vessel, fuel cells (article) . . . . .	7/49
Quality standards, ISO 9000 certification (article) . . . . .	1/54

#### R

RADARSAT . . . . .	
charting ice movement (article) . . . . .	10/17
high seas ship surveillance (article) . . . . .	11/59
Ram-Powell project (R&F) . . . . .	1/17
Raster charts, interim to ECDIS (article) . . . . .	3/10
Recision targets, NOAA . . . . .	4/9, 6/9
Regional Reports, Monterey Bay science centers . . . . .	5/43
Remote Ocean Systems Inc. (Company Profile) . . . . .	12/49
Remote sensing . . . . .	
coastal (article) . . . . .	8/27
U.S./Russia conference . . . . .	8/75
REMOTS, seafloor oil contaminants (article) . . . . .	8/37
Research . . . . .	
bioacoustical oceanography (article) . . . . .	2/10
biogeochemical monitoring (article) . . . . .	7/55
federal funding to drop . . . . .	7/9
mid-ocean spreading, instrument (article) . . . . .	4/33
Oman-India pipeline survey (article) . . . . .	2/16
operational ocean R&D (editorial) . . . . .	1/7
spending forecast (Battelle) . . . . .	2/9
Research vessels, design (article) . . . . .	6/34
Resources . . . . .	
aquaculture opportunities (article) . . . . .	9/59
assessing ocean's worth (article) . . . . .	9/75
closing "seafloor gap" (Soapbox) . . . . .	1/89
manganese nodules (Cook Islands) (article) . . . . .	9/15
marine industry (Editorial) . . . . .	7/7
natural gas hydrates (article) . . . . .	9/69
ocean policy change needed (article) . . . . .	1/59
oceans (Editorial) . . . . .	9/7
offshore oil industry outlook (article) . . . . .	9/19
wave energy system (TUGS) (article) . . . . .	9/10
wave energy system (OSPREF) . . . . .	9/9
Revelle, Roger . . . . .	
christened (article) . . . . .	7/45
launched . . . . .	5/9
Rohrbacher, Rep. Dana . . . . .	
FY 96 NOAA budget . . . . .	7/59
House Energy & Environment Sub. (Science) . . . . .	1/19
NOAA budget targets . . . . .	3/9
Rope, polyester fibers (article) . . . . .	7/10
Rope Technology Workshop, 3rd (Conference Report) . . . . .	9/49
ROVs . . . . .	
development and applications (article) . . . . .	12/33
Hydra Magnum introduced . . . . .	1/66
RoxAnn seabed classification (article) . . . . .	7/15
RTCM Annual Assembly (Conference Preview) . . . . .	3/74

#### S

S-Tether system (article) . . . . .	9/25
Satellite communications, low-Earth-orbit (article) . . . . .	3/61
Satellite wave-climate assessment (article) . . . . .	10/31
Satellites . . . . .	
monitoring sea ice movement (article) . . . . .	10/17
new seafloor map . . . . .	11/9
pipeline planning (article) . . . . .	4/13
Saxton, Rep. H. James, House . . . . .	
oceans subcommittee (Resources) . . . . .	2/78
SBIR (Opinion Poll) . . . . .	5/33
Science & Technology Dept. . . . .	8/74
Scripps fleet, newest is Roger Revelle (article) . . . . .	7/45
Sea Grant (R&F) . . . . .	1/23
Seabed classification instrument (article) . . . . .	7/15
Seafloor mapping, sonar system selection (article) . . . . .	6/27
Seafloor consumption . . . . .	9/9
Seafloor industry, supports reforms . . . . .	10/57
Seafloor, NOAA essential to industry . . . . .	7/9
SeaWatch program, environmental monitoring (article) . . . . .	2/49
SEG 95 (Conference Preview) . . . . .	8/43

Selective availability, study says turn off . . . . .	7/9
Senate, oceanography subcommittee formed . . . . .	1/9
Shear-wave data, seismic exploration (article) . . . . .	8/21
Shipbuilding . . . . .	
loan guarantees (MarAd) . . . . .	4/66
MarAd loan guarantees . . . . .	1/65
Shipping . . . . .	
integrated bridge technology (article) . . . . .	6/63
surveillance via RADARSAT (article) . . . . .	11/59
vessel inspection standards (article) . . . . .	3/66
Ships, Seward Johnson renovation (article) . . . . .	1/62
SHOALS program, Army COE (article) . . . . .	6/10
Small Business Innovation Research (R&F) . . . . .	1/37
Smithsonian, Ocean Planet exhibit (article) . . . . .	6/61
Soapbox . . . . .	
104th Congress ocean prospects . . . . .	5/97
closing "seafloor gap" . . . . .	1/89
defense of NOAA Corps disbanding . . . . .	10/85
electronic chart standards transition . . . . .	3/105
marine hydrostreamer exports . . . . .	8/105
marine salvage . . . . .	2/105

## MAR-VEL Underwater Equip. Inc.

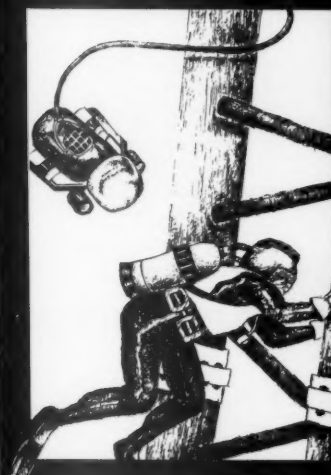
P.O. Box 654 ST, Camden, New Jersey 08101-0654

(609) 962-8719 FAX (609) 962-9084

Washington, D.C. Norfolk, VA

Charleston, SC Panama City, FL

(800) 325-5711



## Diving Specialties

### MAR-VEL is underwater EVERYWHERE

The Mar-Vel Diving Specialties catalog offers the most complete source of diving equipment unequaled elsewhere, featuring a complete listing of diving gear designed for the

commercial operator, skin and scuba diver, marine scientist, photographer, military and salvage diver. Write for free catalog.

## State of the Art Underwater *Products and Services for:*

- Precision Acoustic Navigation and Positioning (SNAP™)
- Automatic Vehicle Control (ROV-DP™)
- 3-D Visualization (OUTLOOK™)
- Precision Search and Survey Electronic Still Cameras (ESC™)
- Mission Planning and Simulation

### *Applications Include:*

- Dam Inspections and Surveys
- Ship Hull Inspections and Cleaning
- Oil and Gas Rig Inspections and Surveys
- Aquaculture Automation
- Nuclear Power Plant Inspections and Surveys
- Search, and Precision Survey and Mapping
- Dredging and Pipe Lay

Marquest™ Marine Products, a Division of:

# Imetrix

*An Employee Owned Company*

1235 Route 28A • Box 152 • Cataumet, MA 02534-0152  
Telephone: (508) 564-6460 • Fax: (508) 564-6860

CIRCLENO106ON INQUIRY CARD

## SHEAVES MADE OF CAST POLYAMIDE



**Diameters up to 75" OD**

### Light Weight

Polyamide has only 20% the weight of steel, and only 65% the weight of aluminum.

### Increased Wire Rope Life

The contact area between cable and groove is almost twice as large than in a steel groove.

### Long Service Life

Resilience, corrosion resistance, and the low inertia of cast polyamide result in long service life.

### Low Cost

Please request our quotation.

# TIMCO

P.O. Box 2059  
Peekskill, NY 10566

Tel: (914) 736-0206  
Fax: (914) 736-0395

Maury Project (education) .....	12/01
nautil charting partnerships .....	11/93
NOAA fleet management .....	9/125
NOAA without the Corps? .....	7/85
"Oceans" of dreams .....	6/105
Zebra mussel education/Sea Grant .....	4/101
Software .....	
ASW combat system modernized (article) .....	11/17
deep-towed sled (article) .....	5/37
programming (article) .....	5/10
Sonar .....	
AN/SQ-89 system (article) .....	11/17
look-ahead comparison (article) .....	3/69
low-cost image processing (article) .....	8/45
low-frequency, active (article) .....	5/54
multibeam echosounder (article) .....	6/67
swath mapping systems (article) .....	6/27
Standards .....	
electronic charts (article) .....	3/10
electronic charts, impact on industry (article) .....	3/23
electronic charts, transition (Soapbox) .....	3/105
Stevens, Sen. Ted, Senate Oceans Subcommittee (Commerce) .....	1/9
Strategic Plan, NOAA (R&F) .....	1/10
Submarine flank arrays (article) .....	11/45
Submarine sonar suites .....	8/63
SUMIC (subsea seismic) data (article) .....	8/21
Supercomputers, NOAA award .....	6/73
Surveillance systems (article) .....	5/69
Survey, readership (article) .....	2/75
Sustainable development, case histories .....	11/63
NOAA priority (R&F) .....	1/10
SWATH ships, designs (article) .....	6/34
-T- .....	
Technology Reinvestment Project .....	2/9
Test system, digital cables (article) .....	7/41
Theseas AUV, multipurpose vehicle (article) .....	4/19
TOA array, update (article) .....	10/47
Tomography .....	
acoustic receiver (article) .....	2/43
motion-decoupled buoys (article) .....	9/25
Transportation Dept., reorganization plan .....	5/77
Trieste 1 35th anniversary (article) .....	6/59
Turbine under Gulf Stream (TUGS) (article) .....	9/10
TUUV program (article) .....	11/35
-U- .....	
Undersea warfare trends, Navy (article) .....	11/50
Underwater Intervention 96 (Conference Preview) .....	12/47
UUVs .....	
Navy's first-generation ORCA (article) .....	11/25
next-generation of vehicles (article) .....	11/35
oceanographic mapping (article) .....	6/49
-V- .....	
Vessel inspection standards, shipping (article) .....	3/66
Vessel traffic service, electronic charts impact (article) .....	3/37
Vessels .....	
fuel cell propulsion (article) .....	7/49
neural network autopilot (article) .....	4/51
Roger Revelle christened (article) .....	7/45
Vision 2100 system, electronic charts (article) .....	3/51
-W- .....	
Waste disposal, artificial islands (article) .....	5/63
Wave energy system, OSPREY .....	9/9
TUGS (article) .....	9/10
Wave-climate assessment, satellite (article) .....	10/31
Weather, forecasts, offshore platform network (article) .....	4/27
new radar .....	8/9
operational predictions (article) .....	5/23
satellite convergence (NOAA/NASA/DoD) .....	7/60
Wetlands management, plant biotechnology (article) .....	4/58
Wetlands preservation, "seafood gap" (Soapbox) .....	1/89
Windows of opportunity (oil spills) (article) .....	10/10
World Submarine Invitational 96 .....	5/78
World Wide Web, ocean information (article) .....	5/74
Oceans 95 online .....	8/9
USCG maritime navigation site .....	11/64
-X/Y/Z- .....	
Zebra mussel education (Soapbox) .....	4/101

## AUTHORS

Aanderaa, Ivar .....	6/43
Alden, Robin .....	1/39
Alexander, Dr. Lee .....	3/10, 3/37
Altschuler, Dr. Thomas W. ....	12/15
Anastasion, Steven N. ....	5/97, 9/7





**OUTLAND  
TECHNOLOGY  
INC.**

**UNDERWATER COLOR  
TV SYSTEMS**



- Low Cost
- Low Light Color Camera
- Remote Focus & Light Intensity Control

We also manufacture internal Pan & Tilt cameras as well as our own Light and Video annotation systems. We can customize our products for your specific need. For more information, contact:

**OUTLAND TECHNOLOGY INC.**  
1808-B Faith Place  
Gretna, Louisiana U.S.A. 70056  
Tel: (504) 367-0104  
FAX: (504) 367-6754  
e-mail Internet, 74030.2532@compuserve.com

CIRCLENO109ON INQUIRY

### CAPACITANCE WAVE HEIGHT GAUGE MODEL WG-30

May be used in the laboratory or in real life application.



#### SPECIFICATIONS

Power: 15 to 40vdc  
Output:  $\pm 5$ vdc  
Linearity: 0.2%  
Accuracy: 0.4%  
Response: 2ms

**WIDE RANGE OF  
DATA LOGGERS AVAILABLE  
SINGLE OR MULTI-CHANNEL  
TEMPERATURE, PRESSURE,  
CONDUCTIVITY, ETC.**

**RICHARD BRANCKER RESEARCH LTD.**  
27 Monk Street  
Ottawa, Canada K1S 3Y7  
FAX: (613) 233-4100  
(613) 233-1621 Telex 054-4761

CIRCLENO110ON INQUIRY CARD

Andreasen, RAdm. Christian	3/105
Askew, Timothy M.	1/62
Austin, Thomas C.	2/10
Baker, Dr. D. James	1/10
Banfield, Stephen J.	7/10
Barstow, Dr. Stephen F.	10/31
Beattie, Giles A.	11/45
Bellingham, Dr. James G.	12/15
Belliveau, Don	10/39
Bergh, Jan O.	10/51
Berian, Albert G.	7/35
Bianchetti, Dr. Fosco	3/23
Bird, Prof. Kimon T.	4/58
Bishop, Dr. Joseph W.	1/37
Bjerrum, Anders	2/19
Bookman, Charles A.	1/59
Bourgeois, Dr. Brian	11/25
Bradley, Dr. Steve	1/50
Braut, Patrice	10/23
Burns, Richard F.	1/29, 3/88, 8/21, 9/65, 11/10, 11/50
Carsey, Dr. Frank	10/17
Chadwick, Dr. William W.	4/33
Champ, Dr. Michael A.	9/75, 10/10
Christian, David K.	10/51
Clark, Vicki P.	4/101
Clarke, Dr. R. Allyn	2/35
Cohrs, Jürgen	2/55
Colgan, Chuck	7/45
Colwell, Dr. Rita R.	1/27
Combs, Gary	7/41
Connelly, Will	7/85
Connors, Dr. Donald N.	6/49
Cotterill, Dr. Phil A.	11/45
Covey, Charles W.	7/7
Cruickshank, Dr. Michael J.	1/40, 2/94, 4/77, 6/87, 8/83, 10/71, 12/

Davis, Brian R.	8/72
Davis VI, RAdm. George W.	1/13
Dawson, James J.	2/10
Deines, Kent	2/61
DeLoach, Stephen	3/56
Demas, Thomas A.	6/34
Dessureault, Jean-Guy	2/35
dgrahamst@aol.com	5/74
Dodd, David	3/56
Dolan, Francis E.	4/27
Doyle, Gerry P.	8/63
Duane, Dr. David B.	1/23
Durham, Dr. Donald L.	5/59
Ecker, RAdm. William J.	3/37
Embley, Dr. Robert W.	4/33
Estep, Dr. Lee L.	6/10
Ferguson, James	4/19
Flemming, Dr. Nic C.	1/44
Flynn, Jan	2/16, 8/15
Forbord, Stig	6/43
Freitag, H. Paul	10/47
Freitag, Lee	2/43
Frye, Daniel	2/43
Fuchscl, Capt. John C.	3/74
Gagliardi, Tod	6/49
Ganjon, Frederick K.	3/10
Garner, William R.	3/61
Garster, James	3/29
Gordon, Dr. Lee	1/50
Graham, David M.	1/43, 2/75, 4/39, 5/74, 9/85, 12/49, 12/57
Gray, Lawrence W.	9/41
Griggs, Dr. Gary B.	5/43
Gwalchmai, Lt. Cdr. Robert	12/10
Hammerstad, Erik	6/67
Hansen, Svein Erling	2/49
Hanson, Robert	6/49
Harris, Mike	11/25
Hearle, John W.S.	7/10, 9/49
Helle, Dr. Werner	7/21
Hirata, Gregg N.	8/49, 9/81
Holt, John	9/10
Iobst-Graham, Barbara S.	5/25
Ishoy, Anders	2/19
Iversen, Steinar	6/43
Joggerst, Patrick	7/29
Jourdan, David W.	8/45
Kaufman, Bruce	12/41
Katherisan, Dr. Kris	2/69
Keefe, Joseph A.	3/66
Kelf, Michael	7/41
Kincey, John E.	7/21
King, Thomas A.	3/51
Knutz, Dr. Thorsten	2/55, 8/68
Kobarg, Sinke	8/68
Krogstad, Dr. Harald E.	10/31
Kukura, James P.	6/34
Kunz, Bernard P.	4/47
Kvenvolden, Keith	9/69
Leary, Tim	7/15
Lehans, Geoff.	2/35
Leggett, Ian M.	4/27

## SURVEY EQUIPMENT RENTAL

KLEIN 595 SIDE SCAN (DF)  
EG & G 260 TH SIDE SCAN (DF)

\* 866 MAGNETOMETER

\* SG BROWN 1000A / S GYROS  
ROBERTSON SKR 82 GYRO

\* SG BROWN 1000U  
UNDERWATER GYRO

\* ODOM 3200(DF) SOUNDERS  
RAYTHEON 719C & DIGITIZER

\* TRIMBLE 4000 GPS RECEIVER

\* DGPS TELEMETRY (VHF/UHF)

\* COASTGUARD DGPS RCVRS

\* ORE TRACKPOINT II SYSTEMS

\* SONARDYNE PAN (MF) AND  
COMPATT TRANSPONDERS

\* COASTAL "HYPACK" S' WARE

\* INTERPLOT 300 ON/OFFLINE  
SURVEY AND PROCESSING  
SOFTWARE

\* TAILBUOY TRACKING

\* LASER RANGE & BEARING

\* CALL FOR ADDITIONAL ITEMS.



**OCEONICS  
INC.**

16203 PARK ROW, # 185  
HOUSTON,  
TEXAS, 77084, USA

TEL : ( 713 ) 578 - 7176  
FAX : ( 713 ) 578 - 0324

CIRCLENO63ON INQUIRY CARD  
DECEMBER 1995 / SEA TECHNOLOGY / 95

## NEW! DSTS-4A

Digital Signal Processing  
Depth Sounder Test Set



**Frequency - Width - Period  
Power - Receiver Sensitivity  
Feet - Meters - Fathoms**

**DSTS-4A does it all!**

- 10 to 650 kHz
- 100 Hz accuracy
- Automatic operation
- Trigger output
- RS-232 option
- External load jacks

**Electronic EDI  
Devices, Inc.**

P.O. Box 15037, Chesapeake, Va. 23328

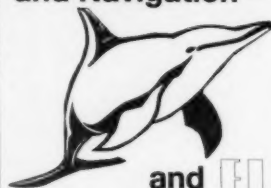
Phone/Fax 800-421-2968

Int'l phone/fax 1-804-421-2968

Loran simulators, Transducer testers

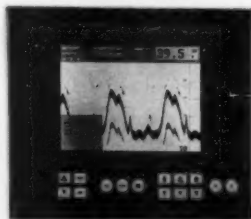
CIRLENO1120N INQUIRY CARD

**Experts for Detection  
and Navigation -**



and **ELAC**

**Navigation Sounder  
LAZ 5000**



Bright LC-display, digital depth,  
date, time and position input,  
fully menu-controlled, user-friendly,  
for all frequencies in use, printer  
output, 24-hours-memory

**AlliedSignal ELAC Nautik**

Neufeldstrasse, D-24118 Kiel Germany  
Phone +49 431 883 0, Fax +49 431 883 224  
USA: Hans F. Lauszus (818) 833-2114

CIRLENO1130N INQUIRY CARD

Levine, Dr. Edward R.	6/49
Lillycrop, W. Jeff	6/10
Logan, Kevin P.	4/51
Loggins, Dr. Chester D.	3/69
Lynch, Dr. James F.	9/25
MacKay, David	12/21
Mahon, Andrew M.	10/39
Maloney, Frank	11/93
Mangum, Linda J.	10/47
Mardell, Garry	8/15
Martello, Carolyn	6/71, 9/89, 10/46, 12/29
Martenson, David	11/59
Martin, James	5/15
Martin, Richard W.	9/59
Masterson, Harold	11/17
McKenna, Hank M.	7/10
McLain, Clifford E.	9/75
McPhaden, Dr. Michael J.	10/47
Meritvat, Dr. Liliana	10/23
Merrill, Maggie Linskey	9/41
Milburn, Hugh B.	4/33
Miller, Theodore L.	9/53
Milwee, Bill	2/105
Moran, Dr. Bradley A.	12/41
Murphy, Larry	7/15
Nazarenko, Dennis	11/59
Nifontoff, Capt. G.K.	11/17
Nordvik, Atle B.	10/10
Nygren, Harley	9/125
O'Neil, Kathleen	9/33
Pagano, Susanne S.	1/17, 4/10
Panaska, Andrew J.	2/69
Parke, Stuart A.	12/33
Plante, Capt. Robert J.	5/23
Pope, Allan	4/19
Prada, Kenneth E.	2/10
Pryor, Taylor A.	9/15
Quartermaster, Cynthia	1/35
Rechnitzer, Dr. Andreas B.	6/59
Rhoads, Dr. Donald C.	8/37
Richardson, Dr. Michael D.	6/17
Richardson, Michael J.	9/53
Ricketts, David C.	7/21
Ricks, James O.	1/54
Rolland, Daniel E.	6/34
Romeo, John	2/61
Sapota, Joseph J.	7/49
Sargent, Lt. Joseph P.	8/56
Scavia, Dr. Donald	8/27
Schmidt, Victor A.	8/10
Schmitt, Roland A.	8/27
Schofield, Colin	5/15
Scoles, Dr. Stephen W.	7/49
Shannon, Brian	3/56
Shell, Richard	6/49
Shumaker, Dr. Randall P.	5/10
Simmons, James L.	10/10
Simmons, Matthew R.	9/19
Smith, Dr. David R.	12/101
Snow, J.W.	2/27
Spears, Mike	8/66
Spiesberger, Dr. John	2/43
Stanton, Dr. Timothy K.	2/10
Staples, Gordon C.	11/59
Stewart, Patrick L.	10/39
Stokey, Roger P.	5/37
Stubblefield, RAdm. William L.	10/85
Takahashi, Dr. Patrick K.	8/49, 9/81
Talbot, Ali	2/55
Tang, Dr. Charles L.	10/39
Tengelsen, Walter E.	1/89, 5/63
Thomas, E. Dail	10/51
Thomsen, Dr. Laurenz	7/55
Timpe, Cdr. Gerald	9/33
Tooma, Samuel G.	6/17
Trenaman, Neil	2/61
Trivett, Dr. D.A.	2/27
Vadus, Joseph R.	8/49, 9/75, 9/81
Vaneck, Dr. Thomas W.	12/15
Venezia, Dr. William A.	9/10
Vyner, Simon	3/47
Wagner, Mary Jo	4/13
Walker, Jeffrey	3/29
Wall, Al J.	8/105
Watkins, Adm. James D.	1/21
Weibe, Dr. Peter H.	2/10
Wells, Dr. David E.	3/56
Wentzell, Hubertus F.	6/63
Wemli, Robert L.	6/105
White, Ronald P.	5/54
Williams, Lt. Gen. Arthur E.	1/36
Williamson, Andrew	7/15
Winchester, Richard G.J.	11/35
Winokur, Robert S.	8/27
Wise, Russell	5/69
Wiseman, Charles H.	5/34
Withrow, Steven G.	6/27
Yu, Dr. Xiaolong	1/50

## OFFSHORE DATA SERVICES

*The source for complete  
news and data on the  
worldwide offshore oil and  
gas industry.*

### NEWSLETTERS

Offshore International  
Newsletter  
Offshore Rig Newsletter  
Interfax Offshore Report  
Gulf of Mexico Newsletter

### DATA PUBLICATIONS

Offshore Rig Locator  
Offshore Field Development  
International  
Gulf of Mexico Field  
Development Report  
Gulf of Mexico Drilling Report  
Industry Directories

### RESEARCH

Offshore Data Services'  
extensive industry data bases  
assist our research staff in  
providing information from  
simple data reports to in-depth  
consulting studies.

### COMPUTER & ON-LINE SERVICES

Most Offshore Data Services  
products are available on  
computer diskettes or through  
our on-line service.

**For free samples or more  
information, write:**

**Offshore Data Services  
P.O. Box 19909  
Houston, Texas 77224  
or call: (713) 781-2713**

CIRLENO1140N INQUIRY CARD

